

Samuel Valiquette

Institution: Department of Mathematics and Statistics, McGill University, Montréal, H3A 0B9

Position: Postdoctoral Fellow in Statistics

E-mail: samuel.valiquette@mcgill.ca * *Website:* s-valiquette.github.io

Education

Joint PhD degree in Mathematics/Biostatistics

Université de Montpellier/Sherbrooke

PhD's degree program

August 2020 - August 2024

Thesis title: [Sur les données de comptage dans le cadre des valeurs extrêmes et la modélisation multivariée](#)

Supervisors: Marchand, É., Mortier, F., Peyhardi, J. & Toulemonde, G.

Joint Master degree in Biostatistics

Université de Montpellier/Sherbrooke

Master's degree program

August 2018 - August 2020

Thesis title: [Théorie des valeurs extrêmes dans le cadre des mélanges de Poisson](#)

Supervisors: Marchand, É., Mortier, F., Peyhardi, J. & Toulemonde, G.

Bachelor's degree in Mathematics/Statistics

Université de Montréal

Bachelor's degree program

August 2015 - August 2018

Work experience

Postdoctoral Fellow in Statistics

Montréal, Canada

McGill University

Since August 2024

Supervisors : Christian Genest & Johanna Nešlehová

BRP

Sherbrooke, Canada

Intern (Master's student)

January 2019 - May 2019

Project: Time series analysis of recreational vehicles

Employment and Social Development Canada

Gatineau, Canada

Intern (Bachelor's student)

May 2018 - August 2018

Project: Statistical analysis of service quality

Division: Analytical research

Statistics Canada

Ottawa, Canada

Intern (Bachelor's student)

May 2017 - August 2017

Project: Master File for graduate students in Canada

Division: Household Survey Methods

Academic Work Experience

Supervisor

Since January 2025

- Ziyu Zhou: Multivariate Modeling via Tree Pólya Splitting ([MATH 410](#), Winter 2025)

Teaching

Since August 2023

- [STT 760: Mathematics for Artificial Intelligence](#) (Fall 23, Fall 24)

Teaching Assistant/Corrector

Since August 2018

- [CQP 201: Linear Algebra and Matrix calculation](#) (Fall 18)
- [MAT 153: Introduction to Linear Algebra](#) (Fall 20)
- [MAT 356: Analytical Geometry](#) (Winter 19)
- [STT 289: Probability](#) (Fall 21)
- [STT 438: Computational Statistic](#) (Fall 22, Fall 23)
- [STT 563: Linear Statistical Model](#) (Winter 21, Winter 22)
- [STT 760: Mathematics for Artificial Intelligence](#) (Fall 21, Fall 22)

Service and leadership

- Co-organizer, alongside [Mehdi Dagboug](#), of the [McGill Statistics Seminar](#) for the academic year 2024-2025.
- Reviewer for articles in the [Journal of Multivariate Analysis](#).
- Judge for the oral and poster presentation sessions at the [Thirteenth annual Canadian Statistics Student Conference \(CSSC\)](#), May 24, 2025.
- Executive member (Vice-president) of the undergraduate student union at the Département de mathématiques et de statistique of the Université de Montréal for the academic year 2017-2018.

Articles

A class of multivariate Bernoulli distributions generated by an aggregation-tree model	<i>In preparation July 2025</i>
Tree Pólya Splitting distributions for multivariate count data https://arxiv.org/abs/2404.19528	<i>Journal of Multivariate Analysis January 29, 2025</i>
Asymptotic tail properties of Poisson mixture distributions https://doi.org/10.1002/sta4.622	<i>Stat September 26, 2023</i>

Talks

Asymptotic Tail Properties of Poisson Mixture Distributions <i>2025 SSC Annual Meeting</i>	<i>Saskatoon, Canada May 26, 2025</i>
Modélisation multivariée par agrégation hiérarchique <i>Séminaires de statistique (Invited)</i>	<i>Sherbrooke, Canada March 6, 2025</i>
Modèle multivarié discret Tree Pólya Splitting <i>Séminaires de STATQAM (Invited)</i>	<i>Montréal, Canada January 30, 2025</i>
Tree Pólya Splitting distributions for multivariate count data <i>McGill Statistics Seminars (Invited)</i>	<i>Montréal, Canada January 17, 2025</i>
Comportement extrême des mélanges Poisson <i>Séminaire du CIMMUL (Invited)</i>	<i>Québec, Canada September 27, 2024</i>

Modèle multivarié discret Tree Pólya Splitting <i>Rencontres scientifiques Montpellier Sherbrooke (Invited)</i>	<i>Sherbrooke, Canada</i> <i>June 20, 2024</i>
Multivariate discrete Tree Pólya Splitting distributions <i>2024 SSC Annual Meeting</i>	<i>Saint John's, Canada</i> <i>June 4, 2024</i>
Comportement asymptotique des mélanges Poisson <i>Semaine des études supérieures - Université de Sherbrooke (Poster)</i>	<i>Sherbrooke, Canada</i> <i>January 24, 2024</i>
Asymptotic tail properties of Poisson mixture distributions <i>2023 Joint Statistical Meetings</i>	<i>Toronto, Canada</i> <i>August 10, 2023</i>
Extreme value theory for the choice of mixture Poisson models <i>52èmes Journées de Statistique de la Société Française de Statistique (Virtual)</i>	<i>Nice, France</i> <i>June 10, 2021</i>
Le Bon, le Standard et le Bayésien <i>Club Mathématique de Sherbrooke</i>	<i>Sherbrooke, Canada</i> <i>January 24, 2019</i>
Le Bon, le Standard et l'Exact <i>Séminaires Universitaire en Mathématiques à Montréal</i>	<i>Montréal, Canada</i> <i>January 12, 2019</i>

Science Popularization

Presentation of graduate studies <i>François-Williams highschool</i>	<i>Saint-Amable, Canada</i> <i>April 10, 2024</i>
--	--

A panel of PhD students from various fields presented their perspectives on university life and the benefits of pursuing advanced degrees to high school students. My aim was to make the work of a statistician and the value of higher education in mathematics accessible and engaging.

Scholarships & Grants

ISM Travel Grant <i>Institut des Sciences Mathématiques</i>	<i>Summer 2024</i> <i>500\$</i>
ISM Graduate Scholarships 2023-2024 <i>Institut des Sciences Mathématiques</i>	<i>Fall 2023</i> <i>5000\$</i>
Valorisation des travaux des étudiantes et des étudiants 2022-2023 <i>Université de Sherbrooke - Faculty of Science</i>	<i>Fall 2023</i> <i>1000\$</i>
ISM Graduate Scholarships 2019-2020 <i>Institut des Sciences Mathématiques</i>	<i>Fall 2019</i> <i>4000\$</i>
Bourse Frontenac 2019-2020 <i>Fonds de recherche du Québec - Nature et technologies</i>	<i>Fall 2019</i> <i>6000\$</i>

Technical skills

Programming Languages/Tools	C, C++, Javascript, R, Python, L ^A T _E X
------------------------------------	--

Language proficiencies

French	Native language
English	Fluent

Research Interests

Multivariate models
Copulas
Extreme Value Theory
Hierarchical Models
Discrete Data
Poisson mixtures
Bayesian Inference